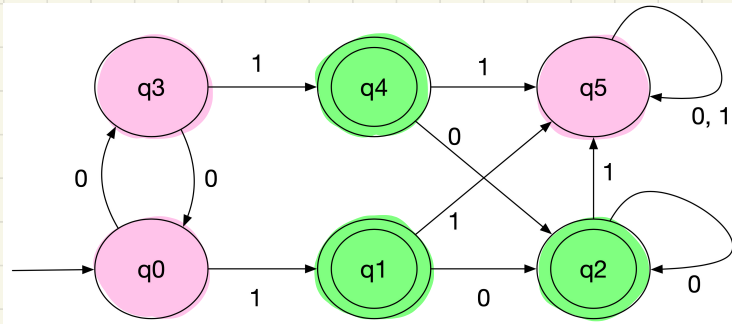


Minimizing DFA: Example (3)



(1)

Initial split:

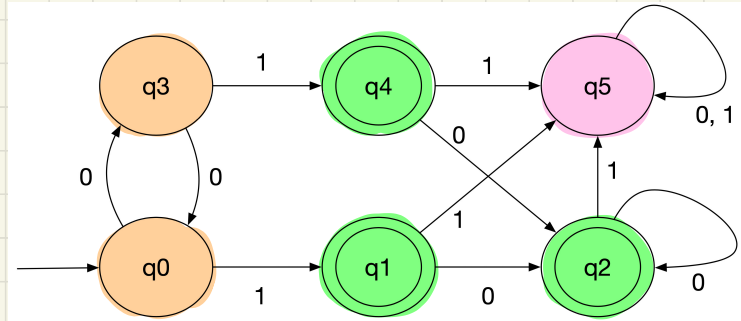
$\{ \{q_0, q_3, q_5\}, \{q_1, q_2, q_4\} \}$
 non-accept states accept states

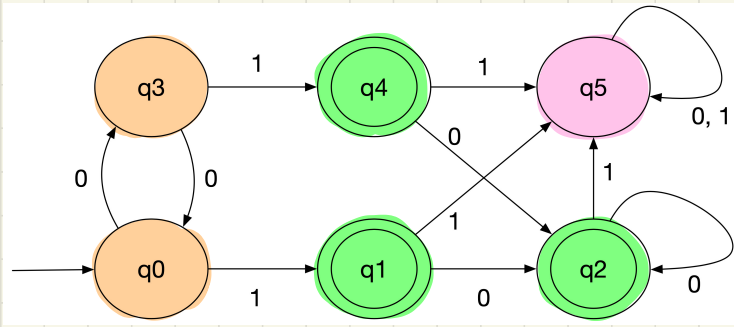
(2)

Consider split $\{q_0, q_3, q_5\}$:

Input 0: $\{q_0, q_3, q_5\} \xrightarrow{0} \{q_3, q_0, q_5\}$
 same partition

Input 1: $\{q_5\} \xrightarrow{1} \{q_5\}$
 $\{q_0, q_3\} \xrightarrow{1} \{q_1, q_4\}$ split!





(5) Consider split: $\{q_1, q_2, q_4\}$
 Input 0: $\{q_1, q_2, q_4\} \xrightarrow{0} \{q_2\}$
 Input 1: $\{q_1, q_2, q_4\} \xrightarrow{1} \{q_5\}$) **no split!**

(3) Consider split: $\{q_5\}$ **no split possible**

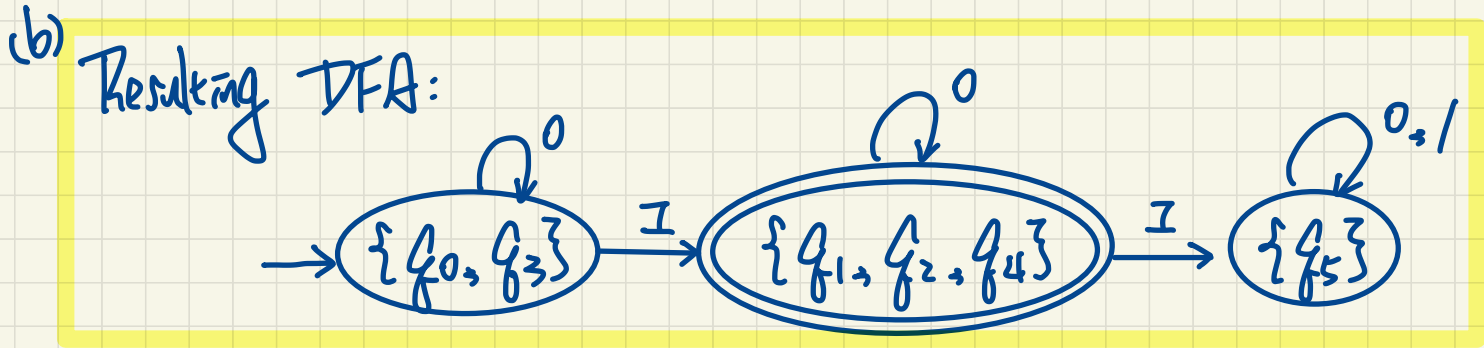
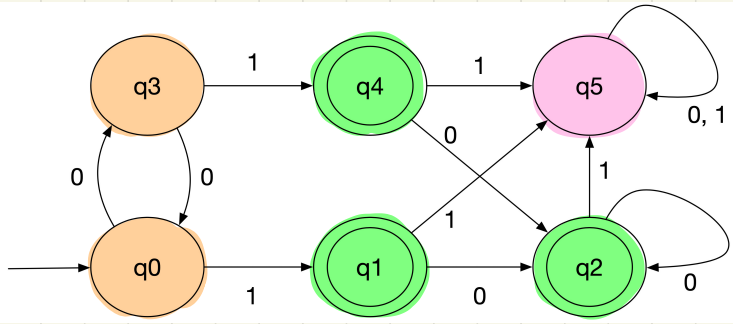
(4) Consider split: $\{q_0, q_3\}$

Input 0: $\{q_0, q_3\} \xrightarrow{0} \{q_3, q_0\}$

Input 1: $\{q_0, q_3\} \xrightarrow{1} \{q_1, q_4\}$

same partition
same partition) **no split!**

\therefore no more splits can be done.



% of state reduction: 50%